WE CLAIM:

1. A pharmaceutical composition comprising an anti-P2Y10 antibody specific for cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, wherein said antibody specifically binds to a polypeptide having an amino acid sequence of SEQ ID. NO: 2.

2. The pharmaceutical composition of claim 1, wherein said antibody is a monoclonal anti-P2Y10 antibody or fragment thereof.

3. The pharmaceutical composition of claim 1, wherein said antibody is a monoclonal anti- P2Y10 antibody or fragment thereof.

4. The pharmaceutical composition of claim 1, wherein said antibody is administered in an amount effective to kill or inhibit the growth of cells that cause a disorder selected from the group consisting inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases.

5. A method of targeting P2Y10 protein on cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, comprising the step of administering a composition to said cells in an amount effective to target said P2Y10-expressing cells, wherein said composition is an anti-P2Y10 antibody that specifically binds to a polypeptide having an amino acid sequence of SEQ ID NO: 2.

6. A method of killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, comprising the step of administering a composition to said cells in an amount effective to kill or inhibit the growth of said cells, wherein said composition is an anti-P2Y10

antibody that specifically binds to a polypeptide having an amino acid sequence of SEQ ID. NO: 2.

7. A method of killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, comprising the step of administering a vaccine to said cells in an amount effective to kill or inhibit the growth of said cells, wherein said vaccine comprises a P2Y10 polypeptide having an amino acid sequence of SEQ ID NO: 2, or immunogenic fragment thereof.

8. A method of killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, comprising the step of administering a composition to said cells in an amount effective to kill or inhibit the growth of said cells, wherein said composition comprises a nucleic acid of SEQ ID NO: 1 encoding P2Y10, or immunogenic fragment thereof, within a recombinant vector.

9. A method of killing or inhibiting the growth of P2Y10-expressing cells that cause a cancer selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, comprising the step of administering a composition to said cells in an amount effective to kill or inhibit the growth of said cells, wherein said composition comprises an antigen-presenting cell comprising a nucleic acid of SEQ ID NO: 1encoding P2Y10, or immunogenic fragment thereof, within a recombinant vector.

10. The method according to any one of claims 5-9, wherein said cells are contacted with as second therapeutic agent.

11. The method according to claim 5 or 6, wherein said anti-P2Y10 antibody composition is administered in an amount effective to achieve a dosage range from about 0.1 to about 10 mg/kg body weight.

12. The method according to any one of claims 5-9, wherein said pharmaceutical composition is administered in a sterile preparation together with a pharmaceutically acceptable carrier therefore.

13. A method of diagnosing disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases comprising the steps of:

(a) detecting or measuring the expression of P2Y10 protein on a cell; and

(b) comparing said expression to a standard indicative of said disease.

14. The method according to claim 13, wherein said expression is P2Y10 mRNA expression.

15. The method according to claim 13, wherein said expression is detected or measured using anti-P2Y10 antibodies.

16. Use of an anti-P2Y10 antibody in preparation of a medicament for killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases, wherein said antibody specifically binds to a polypeptide having the amino acid sequence of SEQ ID NO: 2.

17. Use of a polypeptide having an amino acid sequence of SEQ ID NO: 2 in preparation of a vaccine for killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases.

18. Use of a nucleic acid of SEQ ID NO: 1 encoding P2Y10 or immunogenic fragment thereof, within a recombinant vector, in preparation of a medicament for killing or inhibiting the growth of P2Y10-expressing cells that cause a disorder selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases.

19. Use of an antigen-presenting cell comprising a nucleic acid of SEQ ID NO: 1 encoding P2Y10 or immunogenic fragment thereof, within a recombinant vector, in preparation of a medicament for killing or inhibiting the growth of P2Y10-expressing cells that cause a cancer selected from the group consisting of inflammatory disorders, autoimmune diseases, allergic reaction, organ and tissue rejection, and mast cell diseases.